



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

RECENT LITERATURE.

The Woods Holl Lectures.¹—It is with pleasure that we welcome the second of the series of lectures delivered at the Woods Holl Laboratory, for they deserve a larger audience than that for which they were especially prepared. In the present volume we have ten lectures, each adequately illustrated, most of which are devoted to the presentation of the newest thought upon subjects which are most prominent in the biological world to-day. They are, moreover, not résumés of others' work but actual contributions to knowledge by original investigators. In his lecture on the "Mosaic theory of Development," Professor E. B. Wilson, admitting that the extreme form of this theory is untenable, endeavors to show that in a modified shape it contains elements of truth, "that we may consistently hold with Driesch that the prospective value of a cell may be a function of its location and at the same time hold with Roux that the cell has, in in some measure, an independent power of self determination due to its inherent specific structure." Professor E. G. Conklin discusses certain phenomena in the fertilization of the ovum of *Crepidula*, a form which is especially favorable for the study of the archoplasmatic structures, which he maintains are even more important in the phenomena of impregnation and mitosis than the nucleus, taking as they do the initiative in all the wonderful manifestations of fertilization and cleavage. Further he advances the thesis that the nucleus and especially the chromatin is not of necessity the sole bearer of heredity, a position, which if proved to be true, destroys the whole fabric of Weismann's evolution, as at present constituted.

The third lecture by Professor Jacques Loeb, of Chicago University is upon some facts and principles of what he terms physiological morphology. First he deals with heteromorphosis, that is, describes his experiments with certain Hydroids, there, by reversing the positions, etc., he was able to make roots produce polyps and the free end to grow roots. Next he outlines his experiments with other forms in which there was marked polarity. The third subject is the effect upon certain forms of a change in the density of sea water, while the fourth deals with the production of double and multiple monstrosities in sea urchins, by putting them a short time into diluted sea water and then

¹Biological Lectures delivered at the Marine Biological Laboratory of Woods Holl in the summer session of 1893. Boston, 1894. 8°. pp. 242, \$2.15.

back into normal. In the concluding section, all life phenomena are referred back to chemical processes.

Under the title *Dynamics in Evolution*, Professor Ryder reiterates his mechanical ideas, explains the changes in form of an amœba by differences of surface tension and this again by chemical action. He has no sympathy with "biophores" and "gemmules" and thinks that experimental investigation in embryology will make no firm progress until the mischievous influences of those speculations which deal with "germ plasms" and the like have been entirely eradicated from the present generation.

Dr. Watase, treating of the nature of cell organization, thinks it not improbable that in the cell we have a symbiotic structure, the nucleus and the cytoplasm living together in a way analogous to that presented by the algæ and the fungus in the lichen. Professor Whitman's lecture on the Inadequacy of the Cell Theory of Development is most suggestive, but is so condensed as to be beyond any adequate abstract. In a word it is that in our discussions of the cell as a unit, especially in the experimental embryological researches, the tendency has been to regard the cell as all in all, while in reality the whole organism is the entirety.

The thesis which Dr. Howard Ayers maintains in his study of the Pacific Hagfish *Bdellostoma dombeyi*, are that this form is very variable and that the number of gill slits cannot be used as a criterion for separating genera and species; further that it is a primitive rather than a degenerate type; and lastly that a study of the ears of this animal show that these organs cannot be considered as organs of equilibration.

The next two lectures touch upon the Botanical side. Dr. W. P. Wilson discusses the influence of external conditions on plant life and presents an essay which goes far toward showing that such striking acquired characters as the knees of the bald cypress are not inherited but will disappear in a single generation with changed conditions, and that the same is true of the remarkable roots of the Black mangrove of Tropical America. The other botanical lecture, by Professor J. Muirhead Macfarlane, treats of irrito-contractility in plants, in which he shows that this phenomenon is much more common than is ordinarily supposed, but that there is usually a latent period and that in many instances the stimulus has to be repeated before marked manifestations are produced.

The last lecture—upon the Marine Biological Stations of Europe by Dr. Bashford Deane—is familiar to our readers. The volume closes

by a general statement, by the Director, Professor C. O. Whitman, of the work and aims of the laboratory from which we learn that already 75 papers have been published, the direct outcome of the laboratory in its six sessions.

The volume is well printed and we look for a large sale for it, for it certainly should be in the hands of every one who wishes to keep himself informed of the present tendencies of biological science.

Report of the United States Fish Commissioner for 1889-91.²—This volume contains in addition to the official report of the Commissioner, the results of inquiry respecting Food-fishes and the Fishing grounds of the United States, by Richard Rathbun, and a statement of the Methods and Statistics of the Fisheries, by H. M. Smith, together with six papers published as appendices to the report. Among these is Hæckel's "Plankton-Studien," A Comparative Investigation of the Importance and Constitution of the Pelagic Fauna and Flora, translated by George W. Field.

Mineral Resources of the United States, 1892.³—This volume shows the progress made in the development of the mineral products of the United States in 1892. The statistical tables are carried forward from former reports to the close of 1892, but the descriptive matter has been brought up to a late date in 1893.

²Report of the United States Commissioner of Fish and Fisheries for 1889-91. Washington, 1893.

³Mineral Resources of the United States for 1892. David T. Day, Geologist in Charge. Washington, 1893.